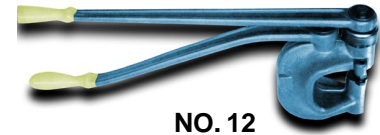
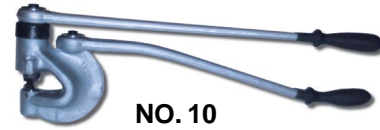
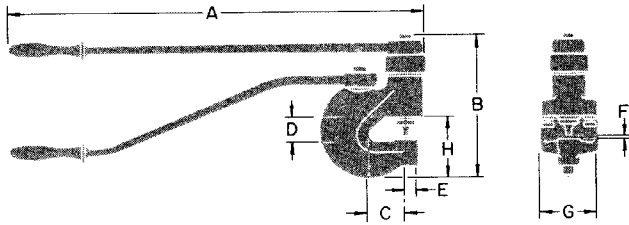


NO. 10, & NO. 12 BALL BEARING PUNCH INSTRUCTIONS AND PARTS LIST



DIMENSIONS	NO. 10		NO. 12	
REFERENCE	IN.	MM	IN.	MM
A	19 1/2	495.3	19 1/2	495.3
B Spindle Up	6 3/4	171.65	8 5/16	211.14
Spindle Down	6 1/4	158.75	7 13/16	198.44
C	1 1/2	38.1	2 1/4	57.15
D	1 1/8	28.58	2 1/8	53.98
E	5/8	15.88	19/32	15.08
F	3/8	9.53	3/8	9.53
G	2 5/8	66.68	2 7/8	73.03
H	1 3/8	34.93	2 19/32	65.88

CARE: Before attaching punch to spindle, grease punch head. Oil punch point.

OPERATION: One complete revolution (360 deg.) of the spindle lowers punch 1/2". When punching I beams, bevel dies should be used. Punch couplers have left hand thread. Punch should turn freely after installation. On contact with metal being punched, the punch should not turn. Stripper bolts must be level at all times.

To remove die, loosen die set screw and push die out. To replace, press die slowly into die holder using a piece of metal on top of die. Make sure die is not cocked. Tighten die set screw.

ASSEMBLY: To assemble spindle assembly, place a small amount of heavy grease in ball race of spindle. Slide stop collar on spindle with notch "A" in stop collar in down position. Place 20 ball bearings (5/16") in ball race of spindle and thread into frame as far as possible, turn back until ball race in frame can be seen. Align notch "A" in stop collar with "B" start of ball race in frame and tighten the three stop collar set screws.

To assemble irregular shaped punches and die, place die in frame. Do not tighten set screw. Fasten punch to spindle with coupler. Thread punch point through guide stripper and fasten guide stripper to frame using screws and spacer furnished. The guide stripper must be level with die and the punch point must never leave the guide stripper. Lower punch and align die and tighten die set screw. Raise punch and lower through die to recheck alignment.

FOR MAXIMUM OPERATOR SAFETY DO:

1. Read and understand this manual.
2. Use only No. 10 punches and dies marked with a W or R-W designed for this tool.
3. Be sure you punch within the 7-ton capacity of this tool. Type and thickness of material versus final hole size will give you this tonnage.
4. Wear safety glasses.

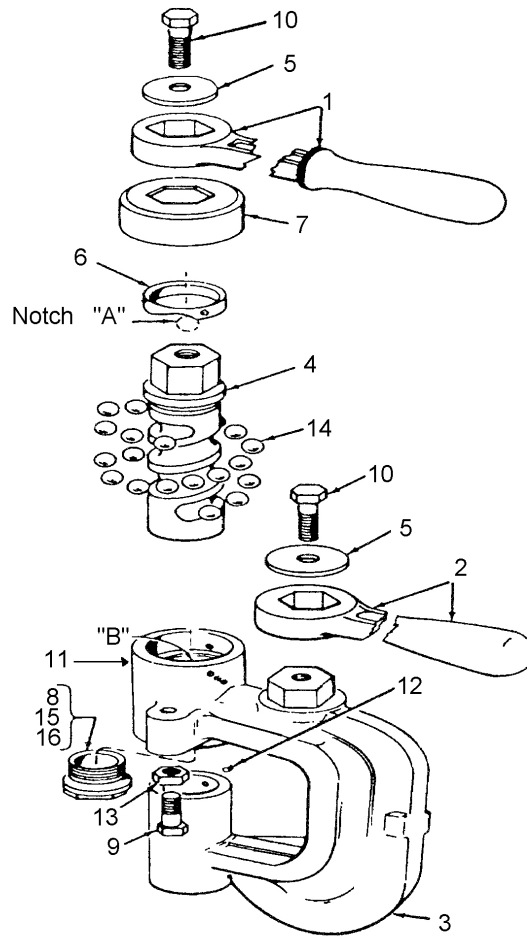
FOR MAXIMUM OPERATOR SAFETY DO NOT:

1. Use punches and dies that are chipped or dulled.
2. Punch over capacity of the tool.
3. Nibble. Punch a full hole, not a half hole, as punch may contact die.



ROPER WHITNEY

NO. 10, & NO. 12 BALL BEARING PUNCH INSTRUCTIONS AND PARTS LIST



ITEM NO.	PART NO.	PART NAME	QTY.
1	730460060	Upper Handle	1
2	730460061	Lower Handle	1
3	730140062	#10 Body	1
3	730140076	#12 Body	1
4	730770063	Spindle	1
5	678033116	Washer	2
6	730260064	Stop Collar	1
7	730220065	Dust Cap	1
8	331001011	1/2 Coupling Nut	1
9	601012133	Stripper Bolt	2
10	601012130	HHC Screw, 5/16-18 x 5/8	2
11	600325900	Set Screw, 12-32 x 1/4	3
12	600325900	Set Screw, 12-32 x 1/4	1
13	649023004	Hex Jam Nut, 5/16-18	2
14	600093700	Ball Bearing	20
15	331001033	Coupling Nut, 17/32	1
16	331001034	Coupling Nut, 9/16	1